DOCUMENT RESUME

ED 411 783 IR 056 263

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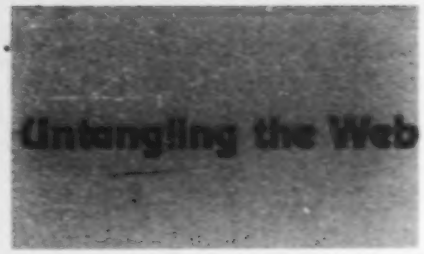
TITLE	Weaving the Web into Course Integrated Instruction.
INSTITUTION	University of Southern California, Los Angeles. Office of Institutional Studies.
PUB DATE	1996-00-00
NOTE	6p.; A downloaded version of one of 29 conference papers placed on the Internet under the following overall title: "Untangling the Web. Proceedings of the Conference Sponsored by the Librarians Association of the University of California, Santa Barbara, and Friends of the UCSB Library" (Santa Barbara, CA, April 26, 1996).
AVAILABLE FROM	Electronic version: http://www.library.ucsb.edu/untangle/
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Computer System Design; *Course Integrated Library Instruction; Higher Education; Information Sources; *Instructional Materials; Internet; *Librarian Teacher Cooperation; *Library Role; Library Services; Material Development; Online Searching; World Wide Web
IDENTIFIERS	Home Pages; Web Sites

ABSTRACT

In the fall 1995, a professor teaching an undergraduate course asked the Reference Center at the University of Southern California to conduct a research session on Dante related resources on the Internet, and to show her students how to search the Dartmouth Dante Project. A simple homepage was created for the class, which listed the course syllabus, the reading assignments, and selected Internet resources related to Dante. Due to the impossibility of telnetting the Dante Project at the time of the class, search screens were downloaded into the class homepage and incorporated into a detailed online search guide, which was distributed as a paper handout. Another project involved showing students in a graduate seminar in French literature how to search ARTFL, a large full text database of almost 2,000 French authoritative texts spanning several centuries. A homepage was created, similar to the one for Dante and search instructions were distilled and presented in class on paper. These two experiences revealed that when designing orignial library instruction with or on the Internet requires considerable preparation time. Important issues to consider are little advance notice frequently given by requesting teaching faculty to develope a project so a program for systematically developing a course-integrated web project on a wider scale must be in place. Also, the time and staff needed to expand pilot projects into programs requires more professional staff. Coordinating the non-intersecting sets of subject expertise of the academic instructor with the subject and technical expertise of the librarian is a major issue. The technical knowledge and expertise with electronic information sources and with issues of integrating these into instruction which librarians bring to a web project can be critical to its final success. One role that librarian can play is to develop web access tools that collocate electronic resources and provide instruction on how to evaluate and use specialized electronic resources that have already been made available through the web by academic faculty and researchers. (AEF)



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Weaving the Web into Course Integrated Instruction

ED 411 783

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Course Integrated Instruction in the Humanities: Two Specialized Examples

In early fall 1995, the Reference Center was asked to conduct a research session by a professor in the department of French and Italian, who was teaching an upper division undergraduate course on Dante's Divine Comedy. She asked the librarians to talk about Dante related resources on the Internet, and to show her students how to search the Dartmouth Dante Project. The Dartmouth Dante Project is an electronic scholarly project started in the early 1980s to provide scholars with line-by-line access to the Divine Comedy in Italian and to approximately 60 commentaries written in Italian, Latin and English, representing 670 years of Dante scholarship. It is a very complex database, based on the BRS search engine, and is not easily searchable. Our faculty member was at one point heavily involved in the inception of the project, participating in the original NEH grant proposal and editing two of the commentaries, but she has not dealt with the database for many years, and did not know how to search it.

Preparing the library session for this course was a collaborative project between myself and a colleague in the Reference Center who is here today, Linda McCann. We were assisted by a third librarian, Eileen Flick, who had considerable technical knowledge and understanding about the Internet. I created a simple homepage for the class, which listed the course syllabus, the reading assignments, and selected Internet resources related to Dante.

My reasons for designing a homepage were as follows:

> A homepage would unify various Internet resources in a meaningful way and for a specific purpose
> It would be good practice, since in my opinion, librarians need to participate in the creation of curricular and research resources on the Internet. This homepage was a start.
> The faculty member was a very important person at the university - it would be good for the library to impress her with its technological and subject related know-how.

Because this faculty member was interested specifically in the Dante Project, Linda and I decided not to delve into the more traditional components of library instruction, such as showing how to go about finding primary and

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secondary print resources in Italian Renaissance literature, since showing how to search the Dante Project would take up most of the class time.

In studying the Dante Project Linda discovered that it was completely impossible to telnet to it at or around noon - the time of our class. The weekend before our library instruction session, she hit on the idea of logging into Dartmouth at a time when it was possible, downloading search screens from the Project into our class homepage and incorporating them into a very detailed online search guide. This way, if we could not telnet to the Project on the appointed day, we could still show the students how to search the database. Both of us spent some time leafing through the Divine Comedy to find interesting canticles for demonstration. As soon as she was able to log on to the Dante Project, Linda performed several searches which demonstrated the research potential of the database, and captured the search screens and the result screens. She then wrote a detailed search guide which explained how to use this complex database. Eileen, the librarian in the department with considerable technical know-how, HTMLed the search guide and added it and the captured screens to the class homepage. After close to 40 hours of work, our class homepage had 30 HTML files and 35 image files and Linda and I had a back-up in case our telnet attempt to the Dartmouth Dante Project failed during class. And it did. Nevertheless, our session was successful, thanks to the "virtual" search guide.

I don't know if giving out our search guide as a paper handout would have worked as well with a class of undergraduates as showing it to them on the Web. Perhaps, if the guide were not so long and complicated, this would have been a good idea. As things stood, the guide worked very well in the hypertext environment offered by the Web browser. Overall, preparing for this course consumed close to 50 hours of 3 librarians' work.

At around the same time I was preparing for a library instruction session to be delivered to a small graduate seminar in French literature. The overarching topic of this course was to examine the development of Rousseau's idea of the social bond in French literature from the late 18th to the end of the 19th century. The instructor asked that I show his class how to search ARTFL, a large full text database of almost 2000 French authoritative texts spanning several centuries. I decided to create a homepage for this course as well, similar to the one we did for Dante, which would link to several interesting sites in literature and criticism, and to a brief listing of important bibliographic resources in French literary studies. Since I already had experience with "throwing together" a course homepage, it didn't take too long to do this time. Then I embarked on the interesting process of learning how to search ARTFL to which my institution subscribes.

ARTFL is another complex database - it started out as a dictionary treasure of the French language, has many authoritative texts, is sensitive to the peculiarities of the French language (such as diacritic marks), and has a very complex system of truncation to accommodate variations in spelling over the centuries. The ARTFL Web site includes online instructions, which by necessity are very lengthy, and are not easy to follow. The course instructor told me that he determined that his students were not electronically proficient, and would therefore need basic instructions. In my opinion, it is close to impossible, and probably not very productive to create basic instructions for a complex full text database, and ARTFL was created precisely to enable complex textual searches. It took me close to 10 hours to distill the online instructions into a manageable and meaningful form. This time, because there were few students in the class and the students themselves had little experience searching full text databases, and because the database was of utmost importance to their research, the search instructions were distributed in class on paper.

Unlike the more traditional library instruction courses which concentrated on the use of known and well established bibliographic sources and guides, these two classes revolved around the use of complex full text scholarly resources in an unstable and ever-changing environment. Scholarly electronic resources require subject knowledge on the part of the searcher (be that a librarian or someone else) because they allow for greater latitude and complexity in manipulating data. Thus, preparing for the two sessions took a long time. Although some of the time was spent on peripherals (i.e., preparing a simple course homepage), most of it was consumed in exploring a particular resource and making it...well...teachable.

In thinking about designing library sessions with the use of the Web, the instructor should keep the following questions in mind:

Design of class

What is the audience? What is its subject knowledge? What are its electronic skills?

Will the demonstration of an Internet resource be "balanced" by discussion of a print resource?
Will there be props/aids developed for the class? Will there be paper handouts, and of what kind? What will be their role vis-a-vis the Internet?
Will the Internet be merely a tool for demonstrating a resource in class, or is there a reason to create a homepage? Are there other reasons to create a homepage? What are the future uses of this page?

Time and Expertise of the Librarian(s)

Does the librarian have knowledge in the subject area (which may be very specialized)? Concurrently, does the librarian understand the research process practiced within the subject area?
What kind of incentive is there for the librarian to engage in specialized instruction and in producing a curricular resource on the Internet?

The proliferation of full text scholarly resources on the Web and in other electronic forms is changing the way we (and the teaching faculty) conceive of library instruction. Teaching faculty (and occasionally students) have the subject knowledge, but often no real understanding of how full text databases are searchable. For librarians, knowing something of the subject matter is very important, but being able to explain how to get from point A to point B in a particular database is of utmost importance.

We would like to emphasize that instruction with the Internet has the potential of becoming very specialized. Consider the fact that in the past, in a class on how to do research on the Divine Comedy, the librarian would have spoken about an array of search strategies the researcher would use to find primary and secondary texts. The availability of a large corpus of texts online changed the thrust of instruction towards a more technological approach; yet the librarian still has to use his/her knowledge to demonstrate a database and to create a guide to it. Librarians who contemplate doing library instruction with or on the Internet must keep track of the time spent preparing and delivering instruction on the use of electronic resources. As our experience with the Dante and the French literature classes shows, preparing a session on the use of even one electronic resource can be extremely time consuming. Presumably, next time we are asked to teach a class on Dante or on French Literature, we would not have to put in as much work. That is, if we assume that in the future these electronic resources would remain the same.

Course-Integrated Instruction Projects: Consequences of Success

As indicated in the first section of this paper, there are several important issues which librarians who are developing course-integrated web pages need to consider. First, because of the relative novelty of the web, these projects frequently are requested by teaching faculty with little advance notice. The instruction is to be integrated into course schedules and syllabi developed by the instructor often well before any consideration has been given to instruction in electronic resources. Of course, one reason for doing this type of pilot project is to create a model that can then be presented to other interested academic faculty, so that a program for systematically developing such course-integrated web projects on a wider scale can be put into place. Once one or two projects have been designed and have proved their usefulness, what happens next?

This leads to a second problem that frequently confronts academic librarians who are developing web tools for course-integrated instruction in addition to all their other activities. The time and staff needed to expand pilot projects into programs for the university at large is simply not in place. With budget and other organizational issues facing academic libraries, it is difficult to get this type of activity past the test pilot phase. While collaborative team efforts between academic and library faculty allow for creative approaches to integrating the web into instruction, team efforts do not necessarily result in less use of professional library staff time and expertise. On the contrary, indications are that they require more professional staff if the efforts are to be successfully expanded. If librarians are to create a role for themselves in a world where the web directly links the instructors and students to information - a role that is more than just that of building and testing model web access tools for faculty to take over and develop into full-blown programs - then we need to move quickly, because much of the current activity in this area is found on academic department homepages, rather than library homepages.

This raises the question whether there is a special role for librarians, given that many scholars are applying their scholarly approaches to developing their own course-integrated web pages. When setting out to build a specialized web tool for academic course-integrated use, one quickly discovers that a major issue is that of coordinating two non-intersecting sets of expertise. The first is the subject expertise of the academic instructor, which is directed

largely to texts and other types of media, and the second is that of the librarian who brings, often in conjunction with some subject expertise, a technical expertise based on his or her training and experience in searching, organizing, providing access to, and evaluating information. The two sets of expertise do not automatically mesh.

Expertise that librarians may have in creating web pages to provide access to specialized scholarly resources can involve several different areas. One type of expertise is entirely technical; a web project may require considerable programming and database design expertise that librarians may possess or have access to through working with staff who possess these skills. The expertise that is involved is not especially different from that required for developing specialized electronic resources that are not on the web or were migrated to the web from a previous environment, such as library catalogs.

Another type of expertise involves conceptual design of a web site that adds value to the sort of tools librarians have always used to increase access to information for research and instruction. In the case of the Dartmouth Dante Project Database, which is a specialized tool designed by scholars for purposes of research and instruction, the content was complex (involving multiple languages and special search techniques), the database interface was not intuitive, and the telnet address was experiencing difficulties that go beyond the traffic problems we are used to experiencing on the Internet. These are familiar problems to librarians who have been heavily involved in library instruction. Based on expertise in library instruction, we studied the subject content of the database and designed sample searches to illustrate typical research problems, and then wrote specialized brief and simplified instructions, in consultation with the faculty in Princeton who designed the Dante database, that included screen dumps as visual aids, and steps for telnet access. A librarian with special technical expertise in creating web documents worked to combine these components into an attractive and intuitive web page.

The technical knowledge and experience with electronic information sources and with issues of integrating these into instruction which librarians bring to a web project can be crucial to its final success. As described in the first part of the paper, the faculty member who approached us for course instruction was originally interested in more traditional library instruction. This faculty member became interested in the web project we proposed as a way to gauge the potential usefulness of electronic resources in future instructional programs. It was important that a web tool was successfully designed and implemented in the first few weeks of the course for students to use for research. A measure used by this faculty member was satisfaction and increased interest by students in the course. This faculty member was very pleased when students reported that this advanced course on Dante for undergraduates in Comparative Literature and Italian was a lot of fun. The faculty member attributed this to our web page and plans to use this page again.

The expertise that librarians bring to this type of pilot project, that of interpreting technology for novice or occasional users, is often considered to be outmoded in the web environment, where information is readily available to be interpreted by the user. The web resources described in this paper provide examples of a justification for incorporating librarians' expertise into instruction, because the web site provides twenty-four hour remote access and instruction to using difficult research tools created by scholars. The usefulness of this type of instructional research web tool has been successfully demonstrated in both pilot projects described in the first part of this paper. Issues of ownership, who will maintain the page to ensure access and preservation, as well as questions of copyright, can be negotiated. What has yet to be demonstrated is that the library is in a position to respond to very many more requests for such course-integrated tools by other academic faculty.

We are still in the early phase of integrating the web into academic course instruction, where both library and academic faculty are driven by the technology. We do not have a good theoretical basis for thinking that spending human and technical resources on developing web course-tools is a good idea. In a time when most innovative instructional ideas are not based on theory, we will need to develop better measures for determining whether integrating the technology of the web improves instruction if we want to develop single projects into programs; otherwise we run the risk of being thrown off a runaway bandwagon.

The initiative for collaborative efforts for pilot projects that involve integrating the web into courses can come from either academic faculty or librarians. Frequently when academic faculty have technical expertise or access to technical expertise, for instance through centers for computing, it will not occur to them to collaborate with librarians unless there is a library program in place that encourages them to do so. However, at this time it is probably safe to say that many academic faculty do not feel a level of comfort with technology or enjoy a level of support from

departments and university administration that allows them to easily initiate projects integrating the web into their courses. Faculty who are interested in incorporating the web into courses can be very receptive when librarians initiate such projects, especially when the emphasis is on the content of the course, rather than on the technology, which many faculty feel can provide a source of frustration or distraction from the ideas or content.

One role that librarians can play is to develop web access tools that collocate electronic resources and provide instruction on how to evaluate and use specialized electronic resources that have already been made available through the web by academic faculty and researchers. These web tools provide access to scholarly electronic resources that would otherwise be relatively inaccessible; this is not because a user can not find them, but because they are difficult to use due to scholarly content and sometimes due to interface design that is not intuitive. A tool that provides access for the novice or occasion user adds value to the scholarly resource and justifies the development of the web project beyond its use in a particular course.

The multi-disciplinary background of many librarians also provides a new perspective regarding the development of electronic resources for the web that can complement the subject expertise of many academic faculty. Faculty may also teach courses in innovative ways that involve pulling together many types of materials in courses that could benefit from using the web to create a research tool. I am collaborating with a faculty member who teaches a course at undergraduate and graduate levels which involves literature, film, and other media, to develop a multimedia web site for the course based on a bibliography and syllabus that will provide hypertext links to additional materials, many of which we will put into electronic form for the first time. This web project will provide a site to incorporate original research that is submitted by graduate students as part of their work for the course to collaboratively build a research resource that can be used by future students as well as researchers. This project would not have been independently proposed by this faculty member, because of the level of comfort with technology and time constraints.

The pilot projects described in this paper involved risk of failure because they were new and untested and because they required many overtime hours of the librarians involved. The innovative ideas as well as the initiation of the collaborative efforts has come from the librarians. As academic libraries are redefining goals and reallocating resources, these pilot projects should be evaluated from the perspective of the value that outreach to academic faculty and the positive new roles that library faculty have taken on can represent in terms of the institutional role of the library. The library will need to determine if these efforts are a priority if they are to continue to be successful and the pilot projects that librarians have been able to initiate are developed into programs that involve library faculty past the initial conception. Academic faculty will go elsewhere for collaborative programs if academic libraries determine that this is not a priority for the future.

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